

Name: _____

Date: _____

FOIL when $A \neq 1$ solution (version 10)

FOIL the expressions shown below:

1. $(9x + 4)(3x + 2)$

$$\begin{aligned} &(9)(3)x^2 + (9)(2)x + (4)(3)x + (4)(2) \\ &(27)x^2 + (18)x + (12)x + (8) \\ &27x^2 + 30x + 8 \end{aligned}$$

2. $(-2x + 8)(-3x - 7)$

$$\begin{aligned} &(-2)(-3)x^2 + (-2)(-7)x + (8)(-3)x + (8)(-7) \\ &(6)x^2 + (14)x + (-24)x + (-56) \\ &6x^2 - 10x - 56 \end{aligned}$$

3. $(3x - 2)(-8x + 6)$

$$\begin{aligned} &(3)(-8)x^2 + (3)(6)x + (-2)(-8)x + (-2)(6) \\ &(-24)x^2 + (18)x + (16)x + (-12) \\ &-24x^2 + 34x - 12 \end{aligned}$$

4. $(-8x + 4)(-3x - 4)$

$$\begin{aligned} &(-8)(-3)x^2 + (-8)(-4)x + (4)(-3)x + (4)(-4) \\ &(24)x^2 + (32)x + (-12)x + (-16) \\ &24x^2 + 20x - 16 \end{aligned}$$

5. $(-8x + 3)(6x + 5)$

$$\begin{aligned} &(-8)(6)x^2 + (-8)(5)x + (3)(6)x + (3)(5) \\ &(-48)x^2 + (-40)x + (18)x + (15) \\ &-48x^2 - 22x + 15 \end{aligned}$$

FOIL the expressions shown below:

6. $(7x - 8)(2x + 3)$

$$\begin{aligned}(7)(2)x^2 + (7)(3)x + (-8)(2)x + (-8)(3) \\ (14)x^2 + (21)x + (-16)x + (-24) \\ 14x^2 + 5x - 24\end{aligned}$$

7. $(4x - 4)(-8x - 7)$

$$\begin{aligned}(4)(-8)x^2 + (4)(-7)x + (-4)(-8)x + (-4)(-7) \\ (-32)x^2 + (-28)x + (32)x + (28) \\ -32x^2 + 4x + 28\end{aligned}$$

8. $(3x + 3)(4x + 5)$

$$\begin{aligned}(3)(4)x^2 + (3)(5)x + (3)(4)x + (3)(5) \\ (12)x^2 + (15)x + (12)x + (15) \\ 12x^2 + 27x + 15\end{aligned}$$

9. $(-2x - 5)(2x + 9)$

$$\begin{aligned}(-2)(2)x^2 + (-2)(9)x + (-5)(2)x + (-5)(9) \\ (-4)x^2 + (-18)x + (-10)x + (-45) \\ -4x^2 - 28x - 45\end{aligned}$$

10. $(8x + 7)(-3x + 7)$

$$\begin{aligned}(8)(-3)x^2 + (8)(7)x + (7)(-3)x + (7)(7) \\ (-24)x^2 + (56)x + (-21)x + (49) \\ -24x^2 + 35x + 49\end{aligned}$$